TRANSLATION

METHOD OF CONVERTING AN AM SIGNAL INTO A QUANTIZED PULSE-DURATION-MODULATED SIGNAL

By

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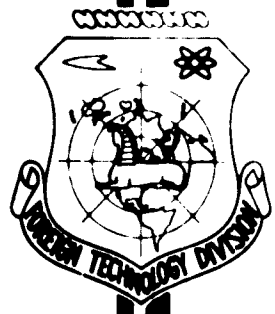
FOREIGN TECHNOLOGY DIVISION



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English Pages: 3

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METHOD OF CONVERTING AN AM SIGNAL INTO A QUANTIZED PULSE-DURATION-MODULATED SIGNAL

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B. I. Nosov

Known are methods of transforming an AM signal into a pulse-width modulated signal by comparing the AM signal with sawtooth voltage. In order to obtainquantum pulse durations, the SHIM (pulse-width modulated) signal is fed to quantum devices.

The described method of transforming an AM signal into a pulse-width modulated signal with quantized durations differs from the known ones by the fact that the AM signal is compared with quantized levels within equal time intervals with the aid of a commutator. This allows to obtain a quantized pulse-width modulated (SHIM) signal without preliminary formation of a nonquantized SHIM (pulse-width modulated) signal, which simplifies devices for the realization of the method.

In the drawing is shown the principal arrangement of the device in accordance with the described method.

The amplitude modulated signal from terminals 1 is fed to the voltage divider, containing resistors 2,3,4, 5. Point of connecting divider resistors are connected in contacts 6,7,8,9 and 10 of the commutator distributor.

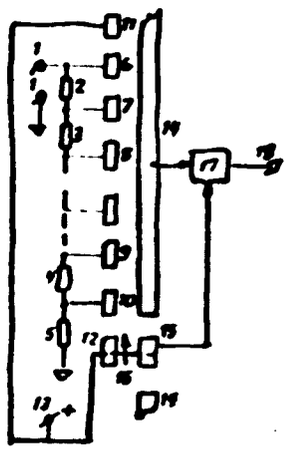
To contacts 11 and 12 of this distributor is fed a positive potential from terminal 13. Insulated contact 6-12 are connected with incomplete ring 14 and contact 15 with the aid of brush 16 of the distributor . In initial state brush 16 closes

contacts 12 and 15. To one of trigger 17 inputs goes a positive potential, keeping the trigger in one of the stable states, e.g. in "unity" state. The output signal is taken from terminal 18. During the movement of brush 16 over the distributor contacts, contacts 6-12 in turn within equal time intervals are connected with the incomplete ring 14 and contact 15. Depending upon the amplitude of the signal fed to terminals 1, tipping of trigger 17 will take place when the brushes will connect the incomplete ring 14 with one of the contacts 6-10. When the brushes approach contact 11 the trigger returns into initial position.

In this way, quantizing of the SHIM (pulse-width modulated) signal takes place directly in the distributor.

Object of invention

Method of transforming and AM signal into a quantized SHIM signal by comparing the first one with quantized levels on comparison systems and by obtaining a width modulated pulse from the trigger with two stable states, distinguished by the fact, that the signal is fed to the comparison circuit by a switch, which switches over comparison circuits in the order of increase in their threshold level, and the work of the trigger is controlled by pulses from comparison circuits and by the switching cycle finishing pulse.



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